In the Drawings

Replacement Sheets are attached which include clean versions of amended Figures 1 and 2. The attached sheets replace the original sheets.

Annotated Sheets Showing Changes are also attached, which include marked-up versions of Figures 1 and 2.

Figure 1 was amended by inserting an annotation "(Prior Art)".

Figure 2 was amended by taking out reference number 38 and lead line in three places.

REMARKS

Applicant respectfully requests reconsideration. Claims 1-20 were previously pending in this application. Claims 1, 5, 6, 14, 15, 16, 17 and 20 have been amended. As a result, claims 1-20 are pending for examination with claims 1, 6, 15, and 17 being independent. No new matter has been added.

Interview Summary

Applicants thank the Examiner for the courtesy of an interview on February 27, 2006. The substance of the interview is summarized herein.

Objections to the Specification

It is requested that the objections to the specification be removed based on the amendments to the specification, drawings and the following remarks.

The Examiner objected to the specification because element 38 in FIG. 2 is not described in the specification. Applicants have submitted a replacement sheet amending FIG. 2 to delete reference numeral 38. Though a connection between disk directors 36 and disk device arrays 28 is described in the specification, for example, at page 13, lines 1-7, the connection is not referred to by name or by reference number 38. Accordingly, the amended drawing is now consistent with the specification.

The Examiner objected to the specification because element 28 was alleged to not described in the specification in connection with FIG. 3. Element 28, however, is described in connection with FIG. 2, such as at page 11, line 21. As a result of the amendment to the paragraph beginning at page 11, line 21, the specification expressly states that element 28 in FIG. 2 refers to the same element in FIG. 3, which should overcome the objection.

The Examiner has also objected to the specification because elements 113, 115 and 117 do not appear in FIG. 4. The amendments to the paragraph beginning on page 18, line 21 should

remove this objection by expressly listing each of the elements in FIG. 4 that appears between steps 112 and step 118 rather than generally referring to the steps between 112 and 118.

The Examiner objected to the specification because element 144 in FIG. 4A is not described. Likewise, the specification is objected to because element 164 in FIG. 4A is not described. The changes to the paragraph beginning on page 22, line 7 should resolve these objections.

The Examiner has objected to the specification because element 230 in FIG. 5 is not described in the specification. The amendment made to the paragraph beginning at page 24, line 8 should resolve this objection.

The above amendments to the Specification and drawings correct obvious and minor errors to make the specification and drawings consistent. These changes do not introduce new matter because they merely incorporate into the specification information that was in the drawings or incorporate into the drawings information that was in the specification.

The Examiner has also objected to the specification because element 198 in FIG. 5 allegedly is not described in the specification. Applicants disagree. Element 198 is described at page 24, line 12 and this objection should be removed.

The Examiner has objected to the specification because the acronym SSL is not defined. As noted by the Examiner in the Office Action, the term SSL is an abbreviation known to those of skill in the art. Therefore, no elaboration is required and this objection should be removed.

Objections to the Drawings

The Examiner also objected to the drawings because reference characters 30, 32, 26 and 82 allegedly have each been used to designate multiple parts. Applicants respectfully disagree.

Reference character 30 identifies a channel adaptor, which may be abbreviated "CHU ADPTR." Reference character 32 identifies a channel director, which may be abbreviated "CHU DIR." Reference character 82 identifies a step in a process in which a socket call is made. The phrase "SOCKET (AF_INET SOCK STREAM, TCP/IP)" appearing in the box identified by reference character 82 represents an example of a computer programming instruction that implements a socket call. Therefore, each of these references charters is used consistently and Rule 1.84(p)(4) is not violated. Accordingly, this objection should be withdrawn.

The Examiner has also objected to the drawings based on the omission of reference characters 113, 115, and 117 and 153, 155, and 157 in FIGS. 4 and 4A. As noted above in connection with the objections to the specification, the specification has been amended so that it does not use these reference characters and this objection should be withdrawn.

Claim Rejections — 35 U.S.C. §103

As a brief summary of the written description of the present application, FIG. 1 depicts a prior art system in which backup and/or restore operations may be performed. The system includes a client computer 16 that is connected to a data storage system 14. Client computer 16 may run an application that stores data in the data storage system 14. As one example, the Background section describes an Oracle relational database application.

The system includes a server 112 that has a long-term storage device 13 attached to it. Client 16 and server 12 are connected together over a network 18. As part of a backup operation, data may move from data storage device 14, through client 16 and over network 18 to server 12 where it is stored in long-term storage device 13. For a restore operation, the data may follow the path in reverse.

FIG. 3 shows an addition to the system of FIG. 1. Specifically, paths 16' connect the client 16 to server 12 through data storage system 14. Processes within client 16 and server 12 have the capability to establish a connection over the network 18 or through the data storage system 14. The system of FIG. 3 solves described problems with the system of FIG. 1 (see, for example, page 10, lines 14-18).

FIGs. 4, 4A, 5 and 5A describe a process by which a communication path between client 16 and server 12 may be established through data storage system 14.

The foregoing summary of the specification is intended for the Examiner's convenience. It is not intended as a substitute for the Examiner's reading of the specification; nor is it intended to define any limitations in the claims. The limitations of the claims are discussed below in conjunction with the rejections.

Rejection Under 35 U.S.C. §103 Based on Anglin in View of Ofek

Each of the independent claims 1, 6, 15 and 17 is rejected based on Anglin in view of Ofek. Applicants respectfully disagree.

Anglin relates to a method and apparatus for facilitating customer service communications. It does not describe a backup or restore operation that may involve communication through a data storage system.

Anglin therefore lacks limitations of claim 1, such as "a second communication mechanism...for facilitating communication between said first and second processes through said data storage system." Because Anglin does not describe two paths, either of which may be used for a backup or restore operation, it does not describe determining which path to use. Therefore, Anglin also lacks "means, within said first and second processes, for...in response to determining that a communication is from said first communication mechanism, facilitating the communication between the first process and the second process over said network, and in response to determining that a communication is from said second communication mechanism, facilitating the

communication between the first process and the second process through said data storage system," as recited in claim 1.

Because Anglin does not describe a method that includes communication through either a network or a data storage system, it does not meet the limitations of claim 6 that recite "establishing at least one first connection over a network...and establishing, in parallel with establishing said at least one first connection, a second connection, through a data storage system."

As to claim 15, Anglin does not meet the limitations of the claim that recite "establishing a connection, over a network...and establishing a connection between said first and second processes through said data storage system." Furthermore, claim 15 recites further limitations that are not shown or suggested in the reference. For example, Anglin does not describe "a dynamically created communication mechanism." Further, because Anglin does not describe a connection through a data storage system, it does not describe "identifying resources on a data storage system to be used in order to transfer information through said data storage system."

As to claim 17, Anglin does not describe the limitations of the claim reciting "a first communication mechanism residing on each of the first and second computers for facilitating communications between the first and second processes over a network; and a second communication mechanism residing on each of the first and second computers for facilitating communications between the first and second processes through a data storage system." Further, because Anglin does not describe transmissions through a data storage system, it does not describe a system "wherein a communication that originates from the first communication mechanism is transmitted between the first and second processes over the network and a communication that originates from the second communication mechanism is transmitted between the first and second processes through the data storage system," as claimed.

As to the combination of references, there is no motivation to combine the references. Anglin relates to customer service communications, but Ofek relates to operation of a remote data facility. There is no teaching or suggestion in the references to motivate one of skill in the art to

select elements of a remote data facility described in Ofek to modify the customer service communications system as in Anglin.

Furthermore, even if combined, the references would not teach the claims as a whole. The combination of Anglin and Ofek, even if proper, would not include all of the limitations of the claims highlighted above. Accordingly, none of the independent claims 1, 6, 15 or 17 is obvious based on Anglin in view of Ofek and all should be allowed.

The remaining claims depend from one of the independent claims and are not obvious for the same reasons. The dependent claims recite further features that distinguish over the references.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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App No.: 09/052325 Docket No.: E0295.70266US00
Inventor: John E. Stockenberg et al.
Title: METHOD AND SYSTEM FOR ASSISTING IN BACKUPS AND RESTORE OPERATIONS OVER, etc.
ANNOTATED SHEET

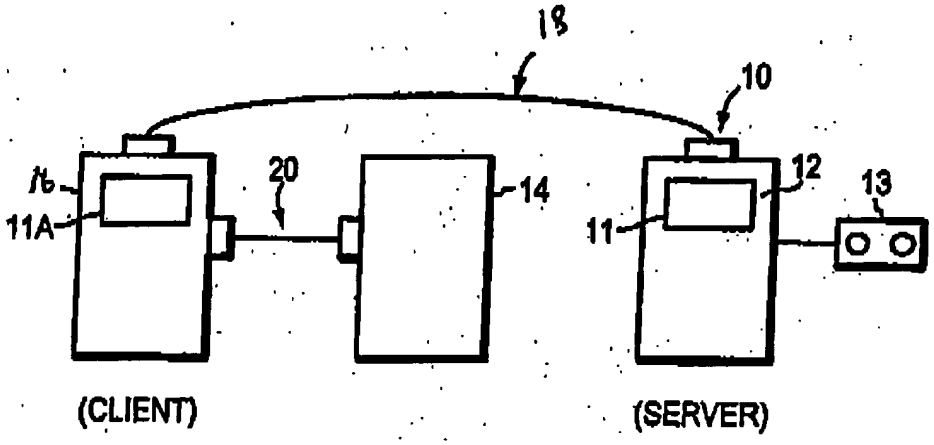

FIG. 1
(PRIOR ART)

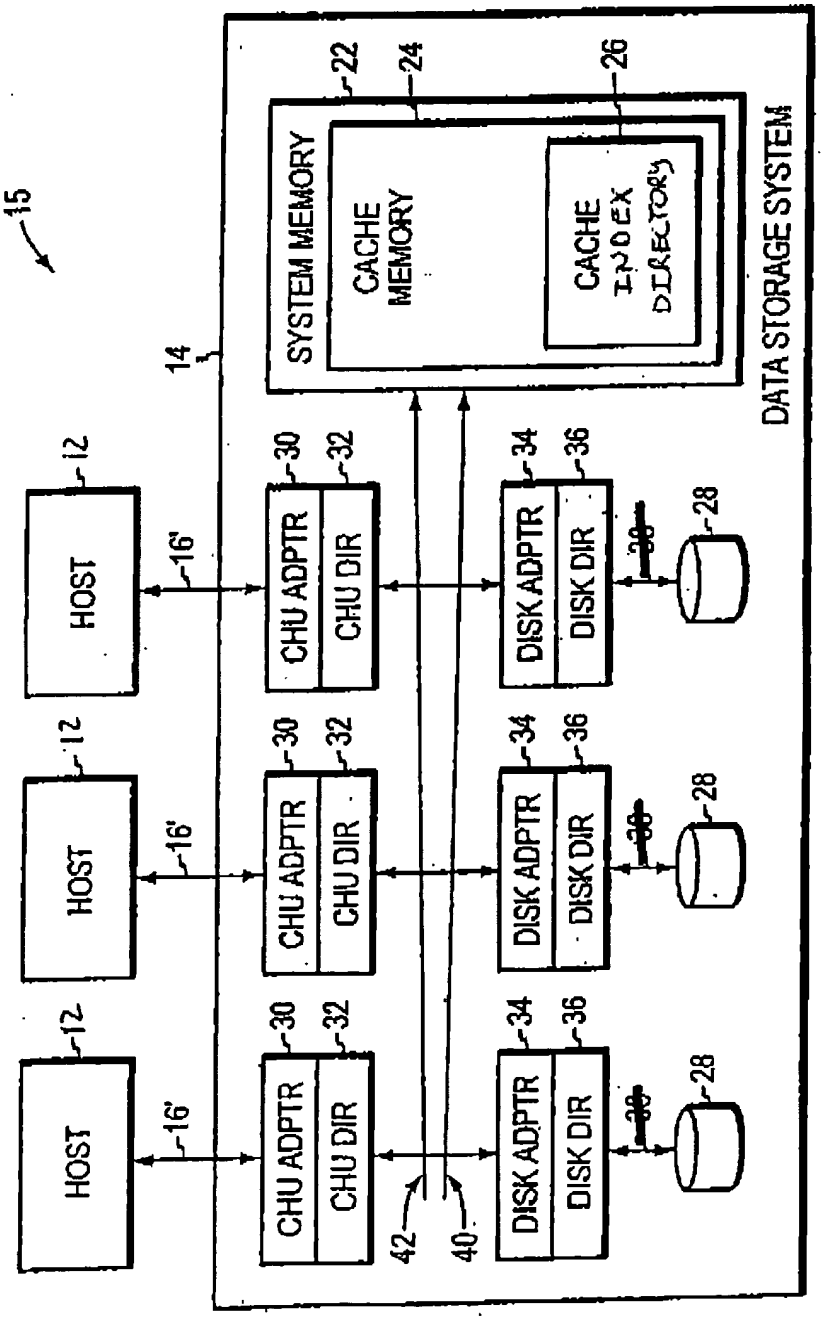
15
14
DATA STORAGE SYSTEM
SYSTEM MEMORY
22
CACHE MEMORY
24
CACHE INDEX DIRECTORY
26
HOST
12
16'
CHU ADPTR
30
CHU DIR
32
DISK ADPTR
34
DISK DIR
36
28
42
40

FIG. 2